

51. (Amended) A method for screening a small organic molecule for the ability to modulate heat shock protein receptor activity comprising:

- Fig 2
- (a) contacting heat shock receptor positive cells with the small organic molecule; and
  - (b) comparing the level of heat shock protein receptor binding activity in the heat shock receptor positive cells contacted with the small organic molecule to the amount of heat shock protein receptor binding activity in the heat shock receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock receptor positive cells not so contacted indicates that the small organic molecule has the ability to modulate heat shock protein receptor activity.

55. (Amended) The method of claim 51 wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the small organic molecule to bind to the heat shock protein receptor positive cells.

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Fig 2

56. (Amended) A method for screening a molecule for the ability to modulate heat shock protein receptor activity comprising:

- (a) contacting heat shock receptor positive cells with the molecule; and
- (b) comparing the level of heat shock protein receptor binding activity in the heat shock receptor positive cells contacted with the molecule to the amount of heat shock protein receptor binding activity in the heat shock receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock receptor positive cells not so contacted indicates that the small molecule has the ability to modulate heat shock protein receptor activity, wherein the level of heat shock protein receptor binding activity is assayed by measuring the

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ability of the molecule to modulate the binding of a heat shock protein or a heat shock protein-peptide complex to the cells.

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57. (Amended) The method of claim 51 or 56 wherein the heat shock protein receptor binding activity is the ability to interact with a heat shock protein receptor antibody.

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63. (Amended) The method of claim 56 wherein the molecule is a peptide or protein, or derivative, analog or fragment thereof.

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65. (Amended) The method of claim 56 wherein the molecule is a small organic molecule, a nonpeptide, or an antibody.

67. (Amended) The method of claim 51 or 65 wherein the small organic molecule is a member of a small molecule library.

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68. (Amended) The method of claim 51 or 56 wherein the molecule is attached to a solid surface.

69. (Amended) A method for identifying a molecule useful for the treatment of cancer comprising carrying out the method of claim 51 or 56, further comprising the step of administering the molecule to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

70. (Amended) A method for identifying a molecule useful for the treatment of an infectious disease comprising carrying out the method of claim 51 or 56, further comprising the step of administering the molecule to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

71. (Amended) A method for identifying a molecule useful for the treatment of an autoimmune disease comprising carrying out the method of claim 51 or 56, further comprising the step of administering the molecule to a non-human animal suffering from an

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autoimmune disease, and determining whether the molecule ameliorates the autoimmune disease in the non-human animal.

95 77. (Amended) The method of claim 51, 56, 69, 70, 71, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

78. (Amended) The method of claim 51, 56, 69, 70, 71, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

79. (Amended) A method for screening a plurality of molecules for one or more molecules having the ability to modulate, directly or indirectly, the ability of heat shock receptor positive cells to stimulate the activation of cytotoxic T cells *in vitro* comprising:

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- (a) contacting said plurality of molecules with: (i) heat shock protein receptor positive cells; (ii) a purified complex of a heat shock protein and a peptide; and (iii) cytotoxic T cells, under conditions conducive to the activation of cytotoxic T cells; and
  - (b) comparing antigenic cell cytotoxicity of said T cells with the cytotoxicity of T cells in the absence of said plurality of molecules,

wherein a lower or higher degree of cytotoxicity indicates that one or more molecules in said plurality of molecules modulates the ability of heat shock receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

80. (Amended) A method for screening an antibody specific to a heat shock protein or a heat shock protein receptor for the ability to modulate, directly or indirectly, the ability of heat shock receptor positive cells to stimulate the activation of cytotoxic T cells *in vitro* comprising:

- (a) contacting the antibody with heat shock protein receptor positive cells and cytotoxic T cells under conditions conducive to the activation of cytotoxic T cells; and

- (b) comparing antigenic cell cytotoxicity of said T cells with the cytotoxicity of T cells in the absence of said antibody,

wherein a lower or higher degree of cytotoxicity indicates that the antibody modulates the ability of heat shock receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

81. (Amended) A method for screening a molecule for the ability to modulate, directly or indirectly, the ability of heat shock receptor positive cells to stimulate the activation of cytotoxic T cells *in vitro* comprising:

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- (a) contacting the molecule with: (i) purified heat shock protein receptor positive cells; (ii) a purified complex of a heat shock protein and a peptide; and (iii) cytotoxic T cells, under conditions conducive to the activation of cytotoxic T cells; and
  - (b) comparing antigenic cell cytotoxicity of said T cells with the cytotoxicity of T cells in the absence of said molecule,

wherein a lower or higher degree of cytotoxicity indicates that the molecule modulates the ability of heat shock receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

82. (Amended) A method for screening a plurality of molecules for one or more molecule(s) having the ability to modulate, directly or indirectly, antigen presentation activity of heat shock receptor positive cells comprising:

- (a) contacting said plurality of molecules with heat shock protein receptor positive cells;
- (b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said plurality of molecules; and
- (c) comparing antigen presentation activity by the heat shock receptor positive cells in the presence of said plurality of molecules with the antigen presentation activity by the heat shock receptor positive cells in the absence of said plurality of molecules,

wherein a lower or higher degree of antigen presentation indicates that one or more molecule(s) modulates the antigen presentation activity of the heat shock receptor positive cells.

83. (Amended) A method for screening an antibody specific to a heat shock protein or a heat shock protein receptor for the ability to modulate, directly or indirectly, antigen presentation activity of heat shock receptor positive cells comprising:

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CONT.
- (a) contacting an antibody specific to a heat shock protein or a heat shock protein receptor with heat shock protein receptor positive cells;
  - (b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said antibody; and
  - (c) comparing antigen presentation activity by the heat shock receptor positive cells in the presence of the antibody with the antigen presentation activity by the heat shock receptor positive cells in the absence of the antibody,

wherein a lower or higher degree of antigen presentation indicates that the antibody modulates the antigen presentation activity of the heat shock receptor positive cells.

84. (Amended) A method for screening a molecule for the ability to modulate, directly or indirectly, antigen presentation activity of heat shock receptor positive cells comprising:

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- (a) contacting a molecule with: (i) a purified complex of a heat shock protein and a peptide; and (ii) purified heat shock protein receptor positive cells;
  - (b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said molecule; and
  - (c) comparing the antigen presentation activity by the purified heat shock receptor positive cells in the presence of the molecule with the antigen presentation activity by purified heat shock receptor positive cells in the absence of the molecule,

wherein a lower or higher degree of antigen presentation indicates that the molecule modulates the antigen presentation activity of the heat shock receptor positive cells.